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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/782,196

02/19/2004

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12453-3

4095

757 7590 07/07/2008
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EXAMINER

WONG, XAVIER S

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

07/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/782,196	Applicant(s) RAYMENT ET AL.	
	Examiner Xavier Szewai Wong	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24th January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims **1 – 24** have been canceled

Claims **25 – 46** have been newly added

This is a Final action

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims **25 – 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Igarashi et al (US 2001/0012777 A1)** in view of **Troxel et al (US 2002/0075807 A1)** and in further view of **Kakemizu et al (US 2002/0018456 A1)**.

Claims **25** and **42**: **Igarashi et al** shows in fig. 3 a network having a plurality of nodes for providing wireless access to a plurality of wireless end user devices including a source device and a destination device (*MN* = source device; *CN* = destination device), the source device being provided wireless access by a source roaming node (*FA*) and being associated with a source home node (*HA*) different from the source roaming node (*FA*), the destination device (*CN*) being provided wireless access by a destination node (*Proxy CN*; [0086]) different from the source roaming node (*FA*) and the source home node (*HA*), a method of routing data traffic between the source device (*MN*) and the destination device (*CN*), the method comprising:

i. receiving the data traffic from the source roaming node (*FA*) at the destination node (*Proxy CN*), the data traffic originating from the source device and being destined for the destination device – [0090]: tunneling from *Proxy CN* to *FA*;

- ii. determining that the data traffic was received from the source roaming node (FA) at the destination node (Proxy CN) – [0126];
- iii. determining that the data traffic originated from the source device (MN) and is destined for the destination device (CN) – [0091]: NAI user identifiers; and,
- iv. forwarding the data traffic to the destination device (CN) wherein any further data traffic destined for the source device (MN) from the destination device (CN) is routed to the source device (MN) without involving the source home node (HA) – [0073];
fig. 2B: $CN \rightarrow FA \rightarrow MN$.

Igarashi et al may not have *specifically* defined (v.) reprogramming the destination node to route any further data traffic destined for the source device (MN) to the source roaming node. **Troxel** et al disclose remote bindings (established by a source mobile node = reprogramming) allowing a correspondent node (CN – as a destination node) to further tunnel messages destined for a mobile node (MN – as a source device) to a foreign agent of the MN (FA – as a source roaming node) without involving a home agent (HA – as a source home node) – [0038-39]; fig. 7: $180b \rightarrow 112 \rightarrow 110$; fig. 8.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the reprogramming / remote bindings to allow a destination node to route traffic through a source roaming node to a source device as taught by **Troxel** et al to modify the Proxy CN function of **Igarashi** et al to avoid involvement of further routing of traffic through the home node / agent and minimize unnecessary network overhead.

While **Igarashi** et al or **Troxel** et al may not have very specifically disclosed a backhaul module to carry out step i and a control module for carrying out steps ii through v above. An example of a “backhaul module” and “control module” would be found in **Kakemizu** et al wherein figure 3 shows a proxy CN 41 comprises of:

- an MAVPN control section, as a backhaul module, for receiving traffic from a foreign agent (FA 21 – source roaming node); and,
- an MA protocol processing section, as a control module, for the traffic determination and the reprogramming or binding updates with the FA or the source roaming node ([0028]).

Claims **26**, **36** and **43**, applied to claims **25**, **35** and **42**: **Igarashi** et al, as modified by **Troxel** et al and **Kakemizu** et al, further show in figures 2B & 3 the destination node is a destination roaming node (*Proxy CN*) is associated with a destination home node (*HA*) different from the source roaming node (*FA*) and the destination home node (*HA*).

Claims **27**, **37** and **44**, applied to claims **25**, **35** and **42**: **Igarashi** et al, as modified by **Troxel** et al and **Kakemizu** et al, further disclose an address of the source device (*MN*) is derived from an address of the source home node (*HA*) – [0065, 0118]; care-of-address, Mobile IP ... home address.

Claims **28** and **38**, applied to claims **27** and **37**: **Troxel** et al disclose the source device IP address is derived from the source home node IP address (fig. 6: MN 10.1.98.49, HA: 10.1.98/48/29; prefix 10.1.98).

Claims **29**, **39** and **45**, applied to claims **27**, **37** and **44**: **Igarashi** et al, as modified by **Troxel** et al and **Kakemizu** et al, disclose routing any further data traffic destined for the source device to the source roaming node comprising associating the further data traffic with an address with an address of the source roaming node which is different from the address of the source home node ([0107]: tunneling & care-of-address).

Claims **30**, **40** and **46**, applied to claims **29**, **39** and **45**: **Igarashi** et al, as modified by **Troxel** et al and **Kakemizu** et al, disclose repackaging the further data traffic using the address of the source roaming node ([0107]: IP-to-IP encapsulation).

Claims **31** and **41**, applied to claims **25** and **35**: **Troxel** et al show in figures 9-13 a gateway node (FA 112d) for tracking wireless end user devices and for relaying data traffic (table 122d) between the mesh network and another network external (*other* autonomous systems) to the mesh network, and wherein the destination node (CN) is reprogrammed (binding updates) to route further data traffic destined for the source device (MN) to the roaming device without involving the gateway node ([0049-51]: gateway 112d *initiates* tunneling for FA 112a and MN 110a, afterwards, 110a can receive using IP address with other MNs 110b-g without using 112d until MN 110a terminates binding).

Claim **32**, applied to claim **25**: **Igarashi** et al, as modified by **Troxel** et al, disclose further traffic destined for the source device (*MN*) which is received by the source roaming node (*FA*) is forwarded by the source roaming node to the source device (fig. 2B: *CN* → *FA* → *MN*).

Claim **33**, applied to claim **25**: **Troxel** et al disclose when mobile node (source device) sends a message to a corresponding node (destination node / device), the mobile node sends its IP address and the IP address of the foreign agent (source roaming node) to the correspondent node (destination node) for tunneling ([0039] lines 4-8), therefore, determining an association between the data traffic (message) and an (IP) address of the source roaming node (foreign agent).

Claim **34**, applied to claim **25**: **Igarashi** et al, as modified by **Troxel** et al and **Kakemizu** et al, disclose determining an association between data traffic and an address of the source device ([0107]); and, determining an association between data traffic and an address of the destination device ([0127-0131]).

Conclusion

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, this action is made *Final*. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xavier Wong whose telephone number is (571)270-1780. The examiner can normally be reached on Monday through Friday 8:30 am - 6:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art
Unit 2616

Xavier Szewai Wong

X.S.W / x.s.w

24th June 2008